

CENSUS OF FATAL OCCUPATIONAL INJURIES



MICHIGAN, 2003

Michigan Occupational Safety and Health
Administration (MIOSHA)
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BACKGROUND - CENSUS OF FATAL OCCUPATIONAL INJURY PROGRAM

The Census of Fatal Occupational Injuries program, part of the BLS safety and health statistics program, provides the most complete count of fatal work injuries available. The program uses diverse state and federal data sources to identify, verify and profile fatal work injuries.

Information about each workplace fatality (occupation and other worker characteristics, equipment being used, and circumstances of the event) is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, and reports to federal and state agencies. This method assures counts are as complete and accurate as possible. This is the eleventh year that the fatality census has been conducted in all 50 states and the District of Columbia.

The Census of Fatal Occupational Injuries is conducted by the Michigan Department of Labor & Economic Growth, MIOSHA, Management Information Systems Section in cooperation with the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor.

2003 CENSUS PROFILES

Major findings of the Michigan Census are:

- Transportation accidents led all other events and accounted for 57 fatalities (38 percent) of the 151 fatal occupational injuries in 2003. This was followed by Contact with Objects and Equipment with 30 fatalities (20 percent), and Assaults and Violent Acts with 22 fatalities (15 percent). (Table 1)
- Fifty-nine percent of the fatally injured Michigan workers were 25 - 54 years of age. (Table 2)
- Based on gender, 93 percent of Michigan's fatally injured workers were men and 7 percent were women. (Table 2)
- Occupations with the largest number of worker fatalities are Management occupations, followed by Construction and Extraction, and Transportation and Material Moving occupations. (Table 3)
- Industry groups with the largest number of Michigan fatal work injuries in 2003 were Construction (30), Agriculture, Forestry, Fishing & Hunting (30), and Retail Trade (16). (Table 4)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan, 2003**

1/ Event or Exposure	<u>Fatalities</u>	
	Number	Percent
Total	151	100
Transportation Accidents	57	38
Highway accident	27	18
Collision between vehicles, mobile equipment	16	11
Moving in opposite directions, oncoming	5	3
Moving in same direction	5	3
Vehicle struck stationary object, equipment on side of road	6	4
Noncollision accident	3	2
Jack-knifed or overturned – no collision	3	2
Nonhighway accident, except rail, air, water	19	13
Noncollision accident	17	11
Pedestrian, struck by vehicle, mobile equipment	8	5
Pedestrian struck by vehicle, mobile equipment in roadway	3	2
Pedestrian struck by vehicle, mobile equipment in parking lot or non-roadway area	5	3
Assaults and violent acts	22	15
Assaults and violent acts by person(s)	14	9
Shooting	12	8
Self-inflicted injury	5	3
Suicide, attempted suicide	5	3
Contact with objects and equipment	30	20
Struck by object	19	13
Struck by falling object	15	10
Caught in or compressed by equipment or objects	5	3
Caught in running equipment or machinery	4	3
Caught in or crushed in collapsing material	6	4

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan, 2003
(Continued)**

Event or Exposure	1/	<u>Fatalities</u>	
		Number	Percent
Falls		17	11
Fall to lower level		13	9
Fall from roof		3	2
Fall on same level		4	3
Exposure to harmful substances or environments		21	14
Contact with electric current		10	7
Contact with overhead power lines		5	3
Exposure to caustic, noxious, or allergenic substances		6	4
Inhalation of substance		3	2
Fires and explosions		3	2

1/ Based on 1992 BLS Occupational Injury/Illness Classification Manual.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 2. Number and Percent Distribution of Fatal Occupational
Injuries by Selected Characteristics, Michigan, 2003**

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	151		100
Employee Status			
Wage and salary workers 1/	115		76
Self-employed 2/	36		24
Sex			
Men	141		93
Women	10		7
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	3		2
20 to 24 years	13		9
25 to 34 years	19		13
35 to 44 years	41		27
45 to 54 years	29		19
55 to 64 years	27		18
65 years and over	18		12
Race			
White	133		88
Black, non-Hispanic	7		5
Hispanic or Latino	4		3

American Indian or Alaska Native	--	--
Asian	4	3
Native Hawaiian or Pacific Islander	--	--

1/ May include volunteers and other workers receiving compensation.

2/ Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan, 2003

1/ Occupation	Number	<u>Fatalities</u> Percent
Total	151	100
Management occupations	32	21
Other management occupations	30	20
Agricultural managers	24	16
Miscellaneous managers	3	2
Sales and related occupations	10	7
Supervisors, sales workers	4	3
Retail sales workers	6	4
Office and administrative support occupations	3	2
Protective service occupations	3	2
Law enforcement workers	3	2
Farming, fishing and forestry occupations	4	3
Building and grounds cleaning and maintenance Occupations	5	3
Construction and extraction occupations	30	20
Construction trades workers	27	18
Carpenters	3	2
Construction laborers	8	5
Electricians	4	3
Painters and paperhangers	4	3
Roofers	3	2
Installation, maintenance, and repair occupations	7	5
Production occupations	16	11
Supervisors, production workers	3	2

Metal workers and plastic workers	5	3
Other production occupations	4	3

Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan, 2003
(Continued)

^{1/} Occupation	Number	<u>Fatalities</u> Percent
Transportation and material moving occupations	30	20
Motor vehicle operators	23	15
Driver/sales workers and truck drivers	23	15
Driver/sales workers	4	3
Truck drivers, heavy and tractor-trailer	18	12
Material moving workers	3	2

1/ Based on the 2000 Standard Occupational Classification System.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal Agencies, Census of Fatal Occupational Injuries.

**Table 4. Number and Percent Distribution of Fatal Occupational
Injuries by Industry, Michigan, 2003**

1/ Industry	<u>Fatalities</u>	
	Number	Percent
Total	151	100
Private Industry	139	92
Agriculture, Forestry, Fishing & Hunting	30	20
Crop Production	23	15
Support Activities for Agriculture and Forestry	3	2
Mining	3	2
Construction	30	20
Construction of Buildings	8	5
Residential Building Construction	5	3
Heavy and Civil Engineering Construction	3	2
Highway, Street and Bridge Construction	3	2
Specialty Trade Contractors	20	13
Foundation, Structure, and Building Exterior Contractors	8	5
Building Equipment Contractors	4	3
Other Specialty Trade Contractors	3	2
Manufacturing	14	9

Primary Metal	3	2
Transportation Equipment	4	3
Wholesale Trade	3	2
Retail Trade	16	11
Motor Vehicle and Parts Dealers	6	4
Food and Beverage Stores	4	3

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan, 2003
(Continued)

1/ Industry	<u>Fatalities</u>	
	Number	Percent
<hr/>		
Transportation & Warehousing	14	9
Truck Transportation	13	9
General Freight Trucking	8	5
Specialized Freight Trucking	4	3
Administrative and Support and Waste Management And Remediation Services	4	3
Administrative and Support Services	3	2
Services to Buildings and Dwellings	3	2
Health Care and Social Assistance	3	2
Arts, Entertainment, and Recreation	8	5
Accommodation and Food Services	4	3
Other Services, Except Public Administration	5	3
Repair and Maintenance	4	3

Government	12	8
State Government	3	2
Local Government	9	6

1/ Classified according to the North American Industry Classification System, 2002.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded.

SOURCE: U. S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 5. Number and Percent Distribution of Fatal Occupational Injuries
by Source of Injury, Michigan, 2003**

3/ Source of Injury	Number	<u>Fatalities</u> Percent
Chemicals and chemical products	8	5
Chemical products—general	6	4
Drugs, alcohols, medicines	4	3
Machinery	17	11
Agriculture and garden machinery	3	2
Construction, logging and mining machinery	3	2
Material handling machinery	6	4
Metal, woodworking, and special material machinery	3	2
Parts and materials	5	3
Persons, plants, animals and minerals	9	6
Plants, trees, vegetation—not processed	5	3
Structures and surfaces	22	15
Floors, walkways, ground surfaces	17	11

Floors		6	4
Floor of building	6	4	
Ground		4	3
Other structural elements		4	3
Containers		4	3
Vehicles		64	42
Highway vehicle, motorized	35	23	
Automobile		10	7
Truck		21	14
Semitrailer, tractor trailer, trailer truck		11	7
Van, passenger or light duty		4	3
Plant and industrial powered vehicles, tractors		25	17
Tractor		22	15

**Table 5. Number and Percent Distribution of Fatal Occupational Injuries
by Source of Injury, Michigan, 2003
(Continued)**

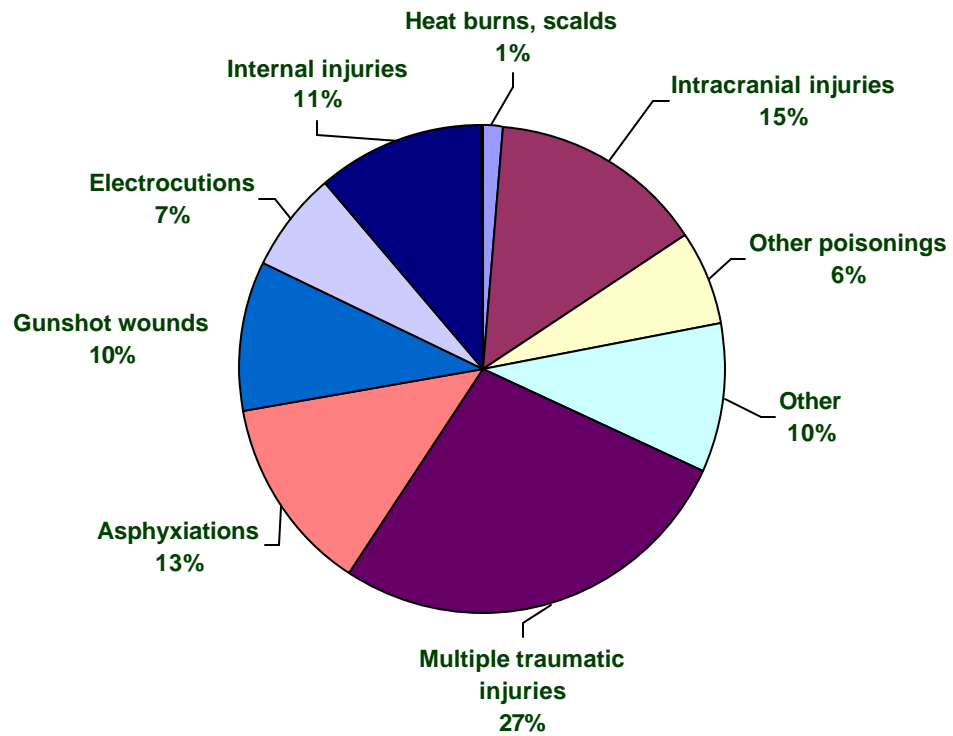
3/ Source of Injury	Number	Fatalities Percent
Other Sources	20	13
Ammunition	15	10
Bullets	15	10
Total	151	100.0

3/ The primary source identifies the object, substance or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded.

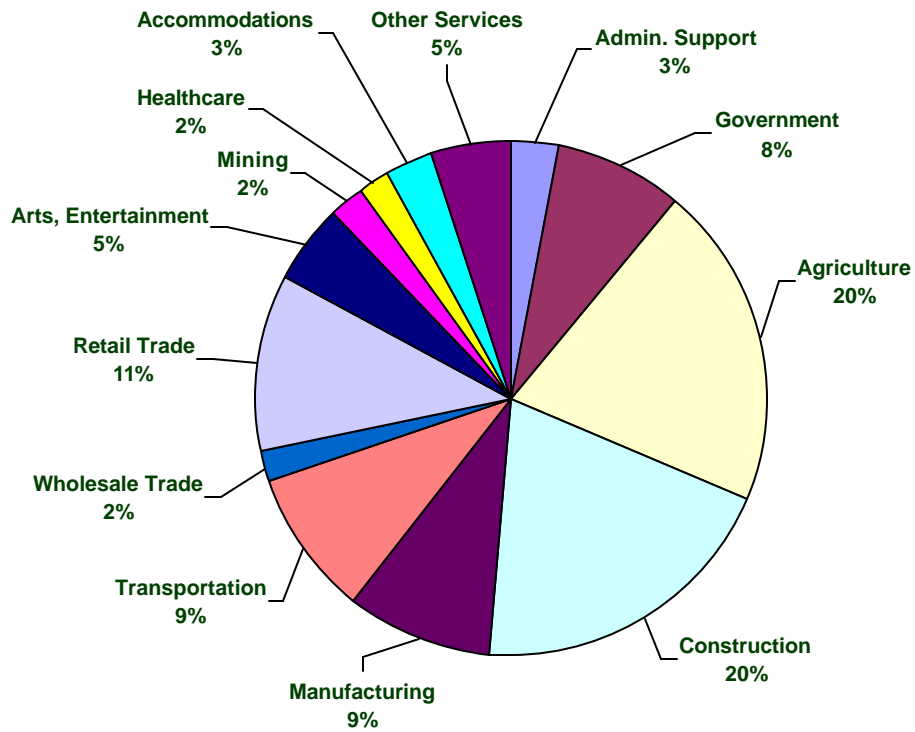
SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, in cooperation with the State and Federal Agencies, Census of Fatal Occupational Injuries

Chart 1
Fatal Occupational Injuries by Nature of Injury
Michigan, 2003



SOURCE: Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

Chart 2
Fatal Occupational Injuries by Industry Division
Michigan, 2003



SOURCE: Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

TECHNICAL NOTES

Definitions

For a fatality to be included in the census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in legal work activity or present at the site of the incident as a requirement of his or her job. These criteria are generally broader than the criteria used by Federal and State agencies administering specific laws and regulations. (Fatalities that occur during a person's commute to and from work are excluded from the census counts.)

Data presented in this release include deaths occurring in 2003 that resulted from traumatic occupational injuries. Fatal injuries involve any intentional or unintentional wound or damage to the body resulting from an acute exposure to heat, electricity or kinetic energy from a crash or a fall. Fatal injuries can also involve the absence of essentials like heat or oxygen caused by a specific event, incident, or series of events within a single workday or shift.

Information on work-related fatal illnesses is not reported in the BLS census and is excluded from the attached tables due to the latency period of many occupational illnesses and the difficulty of linking illnesses to work make identification of a universe problematic.

Measurement Techniques and Limitations

Data for the Census of Fatal Occupational Injuries are compiled from various state, federal and local administrative sources--including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, medical examiner reports and police reports--as well as news and other non-governmental reports. Diverse sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents, or from a source document and a follow-up questionnaire. Approximately 30 data elements are collected, coded, and tabulated, including information about the worker, the fatal incident, and the machinery or equipment involved.

Federal/State Agency Coverage

The Census of Fatal Occupational Injuries includes data for all fatal work injuries, whether they are covered by the Michigan Occupational Safety and Health Administration (MIOSHA) or other federal or state agencies or are outside the scope of regulatory coverage. Thus, any comparison between the BLS fatality census counts and those released by other agencies should take into account the different coverage requirements and definitions being used.

Several Federal and State agencies have jurisdiction over workplace safety and health. The Occupational Safety and Health Administration (OSHA) and affiliated agencies, in states such as Michigan, with OSHA-approved safety programs cover the largest portion of the nation's workers. However, injuries and illnesses occurring in certain industries or activities, such as coal, metal, and nonmetal mining and highway, water, rail, and air transportation, are excluded from MIOSHA coverage because they are covered by other federal agencies, such as the Mine Safety and Health Administration, and various agencies within the Department of Transportation. Fatalities occurring in activities regulated by federal agencies, other than MIOSHA, are included in the count of fatal work injuries for Michigan in 2003.

Fatalities occurring among several other groups of workers are generally not covered by any federal or state agencies. These groups include self-employed and unpaid family workers, which accounted for about 24 percent of the fatalities.

Acknowledgments: We appreciate the effort of all agencies that submitted source documents used to achieve the objectives of this program. To collect and publish data on fatal work injuries that is timely, accurate, comprehensive, and useful for injury prevention.

Among these agencies are the Occupational Safety and Health Administration; National Institute for Occupational Safety and Health; the Centers for Disease Control and Prevention; the Mine Safety and Health Administration; the U. S. Coast Guard; the Employment Standards Administration (Federal Employees' Compensation and Longshore and Harbor Workers' divisions); the National Transportation Safety Board; the Department of Energy; the National Association of Chiefs of Police; the Michigan vital statistics registrars, coroners, and medical examiners; the Michigan Bureau of Workers Disability Compensation; the Michigan Department of Community Health, State Registrar and Division of Health Statistics; the Michigan State Police Office of Highway and Safety Planning; Local Police Departments; and the state farm bureaus.

MIOSHA

Michigan Occupational Safety & Health Act